

Exhibit IV. TFE Preliminary Guidelines Table, 7/29/2003

Critical Spatial Frequency Range	3	to	50	cycles per aperture			
Power Spectral Density of primary mirror	as described in Exhibit VI						
Wavelength Range	550	nm	to	950	nm		
Coatings	Unprotected gold or equivalent						
Polarization	Minimize; Shall be estimated in proposal, and modelled at the end of the study						
Reflectance	Unprotected gold or equivalent						
Reflectance Uniformity	+/- 0.1% rms over critical spatial frequencies						
Telescope f/#	12.3	+/- 0.1		matching 64x64 deformable mirror in testbed			
Operational Environment	(verification by design or analysis)						
Operational Temperature	22	+/-2		C			
Operational Temperature Gradients	< 1000		mK per meter		in x,y or z		
	< 50		mK per centimeter		in x,y or z		
Operational Temperature Transient	< 25		mK per hour		in x,y or z		
	< 2		mK per 60 seconds		in x,y or z		
Storage Temperature	10	to	35	C			
Operational Pressure	<= 2		torr				
Storage Pressure	<= 1000		torr				
Depressuization Rate		5 %/sec					
Storage Humidity		100 %		for 1 year			
Operational Lifetime		8 years					
Cleanliness	Class	300 or better					
Cleanability	Particles	yes					
	Molecular	yes					
Storage Shock	3	g					
Interfaces	(negotiable)						
Mass	<=	120	kg				
Optical Bench Interface	Subcontractor provided, kinematic, attached to (-x) end of optical bench						
Optical Interface	Pupil shall be placed at the plane and angle of the HCIT deformable mirror						
Thermal sources and sinks	Within the vacuum chamber, any source or sink larger than 0.01 watt shall be identified and both DC and transient effects discussed						
Vibration sources	Within the vacuum chamber, any sporadic or continuous vibration or impulse shall be identified and mitigated						